B.Sc. DEGREE EXAMINATION,ODD SEMESTER 2020
III Year V Semester
Operations Research - II

Max.marks :25

Answer any **FIVE** questions $(5 \times 5 = 25)$ Marks

1. Write the dual of the Linear programming problem

   Minimize Z $=4X_1+6X_2+18X_3$
   Subject to $X_1+3X_2 \geq 3$
   $X_2+2X_3 \geq 5$
   $X_1, X_2, X_3 \geq 0$

2. Obtain the initial basic feasible solution using North-west corner rule for the following transportation problem

	D	E	F	G	Availability
A	11	13	17	14	250
B	16	18	14	10	300
C	21	24	13	10	400
Requirement	200	225	275	250	

3. Write a brief note on travelling salesman problem
4. Give any four rules while constructing the network
5. Construct the network diagram comprising activities A,B,C,D,E,F,G,H,I,J,K and L such that the following relationships are satisfied (i) A,B and C, the first activities of the project can start simultaneously
   (ii) A and B precede D
   (iii) B precede E, F and H
   (iv) F and C precede G
   (v) E and H precede I and J
   (vi) C,D,F and I precede K
   (vii) K precede L
   (viii) I,G and L are the terminal activities of the project
6. Explain replacement policy when the value of money does not change with time for continuous time point.
7. Write a short note on slack and float in a network problem